



# FOR A STRONG DIGITAL EUROPE INCLUSIVE. FAIR. SUSTAINABLE.

Strategic Innovation Agenda 2022-2024



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# EXECUTIVE SUMMARY

**We believe in making and shaping a competitive digital Europe that is inclusive, fair and sustainable and aim at global impact through European innovation fuelled by entrepreneurial talent and digital technology.**

We embody the future of innovation by mobilizing a pan-European multi-stakeholder open-innovation ecosystem of top European corporations, SMEs, startups, universities and research institutes, where students, researchers, engineers, business developers and investors address the technology, talent, skills, business and capital needs of digital entrepreneurship.

We build the next generation of digital ventures, digital products and services, and breed digital entrepreneurial talent, helping business and entrepreneurs to be at the frontier of digital innovation by providing them with technology, talent, and growth support.

In order to do so, we operate a multi-stakeholder pan-European ecosystem which mobilises over 350 top European corporations, SMEs, startups, universities and research institutes in 19 innovation centres in Amsterdam, Antwerp, Berlin, Braga, Budapest, Brussels, Eindhoven, Helsinki, London, Madrid, Milano, Munich, Nice, Paris, Rennes, Stockholm, Tallinn, Trento, and San Francisco.

Since its launch, EIT Digital has equipped more than 2,900 students with the skills to innovate and become entrepreneurs; we have supported more than 455 startups and scaleups to grow internationally, created more than 265 new ventures, and launched more than 415 products and services commercially. EIT Digital continues to build on these strong achievements and in the coming years will further accelerate its venture creation activities to further develop its stand-up, start-up, scale-up innovation funnel.

The core of this funnel is the Innovation Factory that creates ventures from open innovation activities carried out by the EIT Digital partnership. This is complemented by the DeepHack, the EIT Regional Innovation Scheme (RIS) Venture programme

and Innovation and Entrepreneurship activities in the education programmes. The EIT Digital Accelerator is focussed on scaling these ventures by supporting them in their growth especially with respect to access to finance and access to market.

A strong digital economy depends on people and organisations equipped with deep technical competence, strong entrepreneurial skills and agility to act. To this end, EIT Digital develops and engages talents in its selection of schools, offering master and professional level education on the latest digital technologies and on the business opportunities they enable.

All EIT Digital activities are concentrated in strategic areas that are essential for European digital sovereignty: digital tech, digital wellbeing, digital cities, digital industry and digital finance. Digital tech addresses innovation in core digital technologies key for Europe, being artificial intelligence, cybersecurity and next generation networks. The other areas are focussed on the application of digital technology in crucial domains, addressing challenges and opportunities like the emerging digital platforms for industry, data-driven applications for promoting a healthier lifestyle and more liveable urban environments or the future of finance.

Activities in these domains are increasingly carried out in collaboration with other EIT Innovation Communities, such as EIT Health and EIT Food in the wellbeing domain, EIT Manufacturing in digital industry and EIT Urban Mobility in digital cities.

To build a strong digital Europe, EIT Digital is increasingly engaging in thought leadership initiatives, such as the Makers and Shapers journey: captains of industry and high-profile startup executives (the Makers) and policymakers from EU Institutions and Authorities (the Shapers) are brought to share their vision on key areas of digital innovation and the way forward to a strong digital Europe.

# EUROPE IN THE DIGITAL WORLD

Digital technologies are deeply transforming our economy and society. One way to observe this is by looking at the world’s most valuable public companies: digital companies are vastly dominating the list. The situation is similar when we look at the world’s most valuable private companies (see Figure 1).

## MOST VALUABLE PUBLIC COMPANIES

Position	Country	Company	Valuation (\$US Billion)
1	US	Apple	2,050
2	US	Microsoft	1,778
3	US	Amazon	1,558
4	US	Alphabet	1,395
5	US	Facebook	838
6	China	Tencent	766
7	US	Tesla	641
8	China	Alibaba Group	615
9	Taiwan	TSMC	613
10	US	Berkshire Hathaway	590

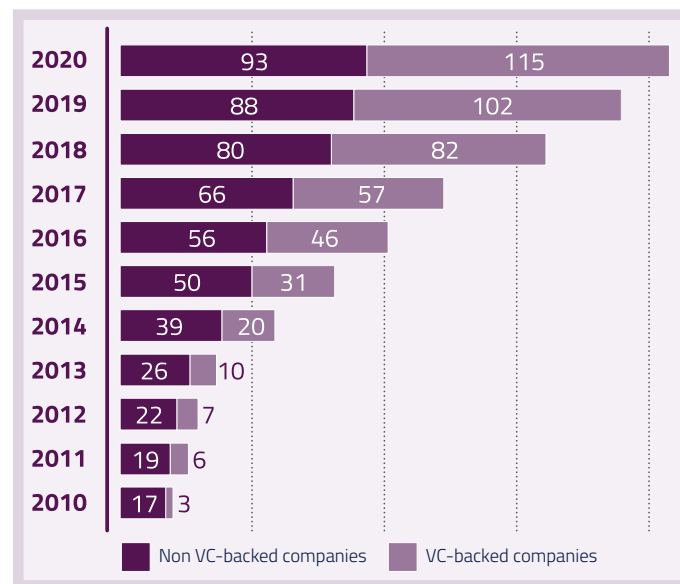
## MOST VALUABLE PRIVATE COMPANIES

Position	Country	Company	Valuation (\$US Billion)
1	China	Bytedance	140
2	US	Stripe	95
3	US	SpaceX	74
4	China	Didi Chuxing	62
5	US	Instacart	39
6	Sweden	Klarna	31
7	US	Epic Games	29
8	US	Databricks	28
9	US	Rivian	27
10	Brazil	Nubank	25

**Figure 1:** World most valuable public (left) and private (right) companies as of April 2021. Source: [https://en.wikipedia.org/wiki/List\\_of\\_public\\_corporations\\_by\\_market\\_capitalization](https://en.wikipedia.org/wiki/List_of_public_corporations_by_market_capitalization), <https://www.cbinsights.com/research-unicorn-companies>

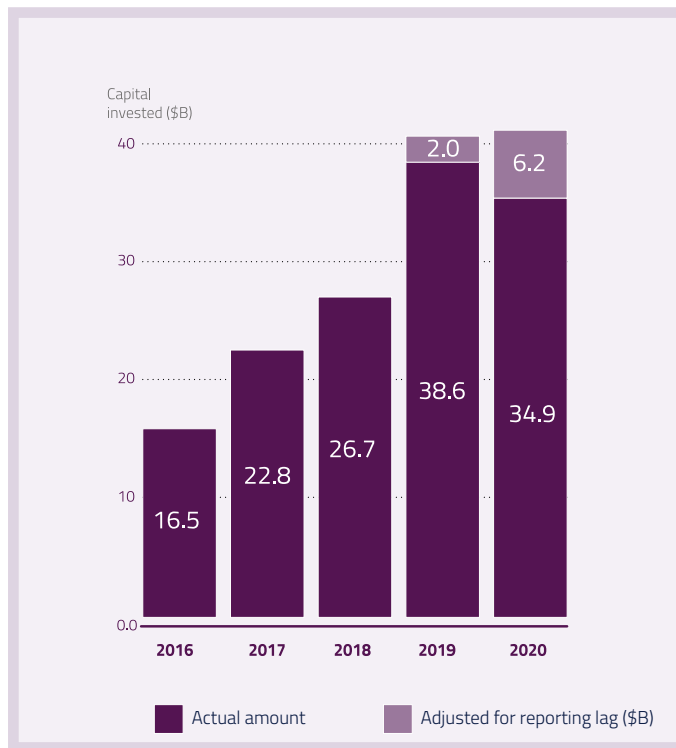
There is another observation that appears in these rankings: Digital is dominated by the US and China. There is only 1 European company in the rankings.

There are a variety of reasons for this. First and foremost, Europe failed to invent the first waves of digital: the dominating operating systems, search, mobile and social platforms are not European. Winner-take-all network effects and massive investments by American and Chinese corporations put them in the leadership role. Nonetheless, over the past few years, the situation with respect to entrepreneurship and digital innovation has significantly improved in Europe. In fact, although Europe is still behind the US and China, it is currently (as of early 2021) home to 208 “unicorns”, that is, private companies valued at over \$1 billion (Figure 2).



**Figure 2:** Number of European tech companies valued at over \$1 billion, since 2010. Source: Atomico: The State of European Tech 2020 ([www.thestateofeuropeantech.com](http://www.thestateofeuropeantech.com))

Both at the European and national levels, we see increased investment to support entrepreneurs in building and growing their ventures as well as an increased investment in digital technology and deep tech (see Figure 3). Notably areas like AI, cybersecurity and robotization are high on the agenda as well as more infrastructure-oriented investments in high performance computing and next generation networks (5G, IoT). Longer-term investments in quantum computing, photonics and optical computing are also on their way.



**Figure 3:** Venture capital investments in European digital companies are significantly increasing

Source: Atomico: The State of European Tech 2020 ([www.thestateofeuropeantech.com](http://www.thestateofeuropeantech.com)).

In Europe these investments in core digital technologies find their way into several application areas where the digital transformation is having high impact such as industry (3D printing, robotics, Industry 4.0, logistics), urban mobility (self-driving cars, multimodal transportation), and finance (digital currencies, blockchain).

In order to build a strong digital Europe, we believe that the following challenges need to be addressed:

- **Bring European values to the digital world.** To achieve this, regulation is one way, but a more compelling way is to build global European digital businesses. Europe needs to focus on scaling up disruptive digital ventures that have the ambition to conquer the world.
- **Further address fragmentation to support digital enterprises and entrepreneurs.** Europe needs to accelerate on the Digital Single Market and work towards making the whole of Europe the “de facto” domestic market for European entrepreneurs.
- **Raise R&D investments in digital technologies, with an emphasis on software.** Currently, American and Asian companies are massively investing, while European companies are more conservative.
- **Strongly increase deep tech innovation investments,** so as to take mature research results out of the labs and into the market, especially by means of entrepreneurship.
- **Adapt the European education system to the digital reality,** to equip people with the right digital skills and to deploy digital technology to support education.



# ECOSYSTEM

## VISION

In Europe we see a fragmented landscape when it comes to digital markets. This fragmentation hinders Europe's effectiveness in the digital world. Rather than relying on individual national innovation activities, EIT Digital connects them, thus building a pan-European digital ecosystem. Because at EIT Digital we are convinced that the future of innovation is in ecosystems. Consequently, a pan-European ecosystem forms the core of EIT Digital: a diverse partnership of first-class digital innovation actors including universities, research institutes, business (from startup to SME to large corporate), and national innovation clusters. Although digital is all about virtual presence, we strongly believe in physical proximity to fuel the

creativity needed to drive true innovation. Therefore, we invest in our so-called Co-Location Centres, where students, researchers, engineers, business developers and entrepreneurs physically come together to co-create the digital future. EIT Digital, as a non-for-profit association under Belgian law, has its main office in Brussels, with its pan-European ecosystem centred around Co-Location Centres (CLCs). This is our powerhouse to achieve global impact through European innovation fuelled by talent and digital technology.



Starting from five CLCs in 2010, we are meanwhile located in nine EU countries with a total 18 European locations (see Figure 4). In addition, we have a Hub in San Francisco to be well connected to the cradle of digital innovation: Silicon Valley.

Co-Location Centres are hotspots where talents cross-pollinate to create value. Students take classroom courses or study, innovation activities are conducted in agile settings, startups and scaleups are

hosted; the EIT Digital staff works out of the CLCs as well (see Figure 5).

The number of our partners has risen steadily over the years (see Figure 6). Noteworthy is the steady increase of the proportion of business partners in our ecosystem. While in 2010 21% of our partners were from industry, this has risen to almost 70% in 2021.



Figure 4: EIT Digital locations in Europe.



Figure 5: Co-location centres are hotspots where talents cross-pollinate.

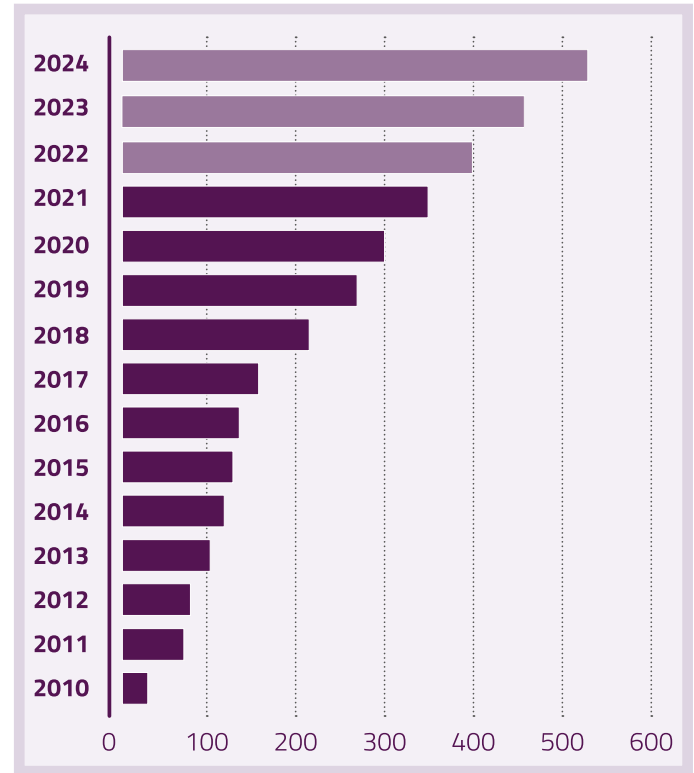


Figure 6: The number of EIT Digital Partners has been steadily increasing through the years.



## A SCALABLE AND SUSTAINABLE ECOSYSTEM

In the coming years, we will continue our transformation into a scalable and sustainable organisation that can support activities across the whole of Europe. We will strive for strengthening and consolidating our core European ecosystem.

As part of our overall financial sustainability strategy, we will further deploy our ecosystem sustainability by mobilizing local, regional and national financial support for the operation of our existing CLCs. Rather than establishing new Co-Location Centres we will develop our ecosystem through welcoming additional partners and establishing new Satellite locations. The establishment of any new location will only be considered if the financing of its operations through non-EIT means is guaranteed.

In order to serve the whole of Europe, each Node covers its respective country and a set of non-Node countries (including Horizon Europe Associated countries) in its geographical reach. To this end, the EIT "Regional Innovation Scheme" (RIS) program, focused on countries which present lower level of innovation, has been fully integrated in EIT Digital's core ecosystem thus allowing individuals and organizations from RIS countries to access to and benefit from the whole set of EIT Digital activities.

An example is represented by the RIS Venture Programme which supports entrepreneurs from RIS countries in creating their DeepTech ventures. The program has been launched in 2018 and 4 successful editions have meanwhile taken place, leading to the creation of more than 100 ventures in RIS countries. After the launch of the first two EIT Digital Satellites in Portugal and Estonia, we are currently exploring the establishment of Satellites in Greece and Slovenia.



## GLOBAL PRESENCE

Our Silicon Valley hub has put Europe on the map in Silicon Valley, benefitting our continent in the cradle of digital. The impact of our hub convinced the EIT and other EIT Innovation Communities to establish an EIT hub in San Francisco under the leadership of EIT Digital. Following Brexit, EIT Digital has also been instrumental in setting up an EIT hub in the UK in order to maintain and strengthen the EIT Community activities in the UK in the post Brexit context. Both hubs have been modelled after the successful EIT House in Brussels that was already established under the leadership of EIT Digital.

Opportunities to further expand our global presence will be carefully analyzed in collaboration with other EIT Innovation Communities.



# FOCUS AREAS STRATEGIC FOR EUROPE

We strategically concentrate our “deep tech” investments in selected focus areas with significant European relevance and leadership potential:

## DIGITAL TECH

inventing the digital future with core technologies providing secure, robust, responsive and intelligent communications and computation.

## DIGITAL WELLBEING

safeguarding health for the youth, the working professional and the elderly by analysing sensor data.

## DIGITAL CITIES

serving the cities with digital technologies addressing urban mobility, citizen inclusiveness and engagement, and city safety and resilience.

## DIGITAL FINANCE

the disruption of digital transactions and institutions with technologies that allow transparency, efficiency, security and trust.

## DIGITAL INDUSTRY

the digital transformation of the industry, from production to logistics to retail.





## INNOVATION NEEDS

Core digital technologies are the basis of our economy's and society's deep digital transformation. We invent our digital future with novel communication, computing and cybersecurity technologies, especially software. These technologies are not only a necessity to serve vertical segments: they are also driving a massive number of students, addressing the shortage of specialists in digital, and offering major innovations and opportunities for GDP growth. Europe needs to stay in the lead in the areas where it is currently strong (networking, 5G, IoT), play a leadership role in digital's next platform revolution (artificial intelligence) and establish broad trust in digital (cybersecurity, privacy).

## EDUCATION NEEDS

All core digital technologies require a number of skills to be able to make an efficient use of them. Among others, the following skills are required: Fundamentals of Data Science, Statistics, Programming Knowledge, Data Manipulation and Analysis, Data Visualization, Machine Learning, Deep Learning, Big Data, Software Engineering, Model Deployment, Communication Skills, Storytelling Skills, Structured Thinking and Curiosity.

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## FOCUS

In line with the innovation needs, the Digital Tech area will focus on secure, robust, responsive and intelligent communications and computation.

More specifically, the focus areas are: (i) in networking: the mobile broadband infrastructure (5G), network 'softwarisation', and the Internet of Things; (ii) in computing: cloud computing, big data, and artificial intelligence; (iii) in security: cybersecurity, privacy and trust. Especially important are convergent solutions integrating all of the above components.

We mostly focus on software. Software is by design flexible – it has an innate ability to evolve, adapt and update. It is also at the heart of the digital revolution.

In this area, we closely monitor the development of quantum computing, photonics and optical computing to determine when they become mature enough for market adoption.

In the coming years, we will put an emphasis on Digital Tech, the area that covers core digital technologies. This horizontal area is our core expertise and it is where "deep tech" is rooted.



## INNOVATION NEEDS

By 2050, the global urban population will increase by 75% to 6.3 billion (i.e. two thirds of the world population). The challenge of developing and maintaining attractive, inclusive and safe urban environments needs to be met on multiple fronts.

Stakeholders are local governments, city service providers, industry, and the citizens.

Mobility as a service integrates public, private, peer-to-peer, conventional, clean, or autonomous transportation means. It will benefit from the increasing will of citizens to participate in the sharing economy.

Besides their traditional role, cities are increasingly organising and exposing data, especially in real time. City data along with analytics and machine learning improves engagement and inclusiveness of the citizens and of the visitors. Augmented and virtual reality of the city are another facet of exposing or simulating city data from the past, present or future.

A key factor for the attractiveness of a city is the safety of its citizens and visitors: safety of the city and its general resilience to unplannable natural events (e.g. heavy weather) or man-made events (e.g. terrorist attacks).

## EDUCATION NEEDS

Education is an important element in smart city development. Strengths in education, advanced training and certification, universities, e-learning infrastructure, lifelong learning and innovation in education technologies are all part of what defines a smart city. Smart cities recognize the need for educational programmes producing graduates with modern knowledge, practical skills and collaborative attitudes.

## FOCUS

In line with the innovation needs, the Digital Cities area will focus on: (i) urban mobility, including autonomous transportation (ii) citizen information, inclusiveness and engagement (iii) city safety and resilience with respect to environmental, economic, and demographic developments.

We will develop breakthrough solutions with sustainable business models to cope with the challenges that city governments, citizens and businesses are facing in their roles as stakeholders of the urban environment. The high-level objective is for the governments to manage the cities more efficiently, make sure they are resilient, and include citizens in the life of the city.



## INNOVATION NEEDS

With the digital transformation, the manufacturing industry is faced with new technological opportunities and business models. Digital has opened new ways to organise production, logistics and delivery, and offers better means to serve and satisfy consumers. Mass production is increasingly flexible, individualised and resource-friendly to be able to serve the “long tail” of the customer markets. Production is monitored and controlled in real-time to reflect dynamically changing customer demands. At the other end of the chain, real-time consumer trends are collected with increasing levels of granularity. Big data is produced, traded and shared. A major share of the value of the whole business domain is contained in this big data.

## EDUCATION NEEDS

Industry 4.0 refers to the fourth industrial revolution. It calls for a dynamic transformation of how all aspects of business and production are done. A new wave of global technology will change global production. Internationalization, in all aspects of business and industry, will be the norm. Future workers will need to be highly trained in the emerging technologies but also, as importantly, in the values associated with using those technologies. In the future, we must not only possess the ability to develop the technology but also to know whether, when, and where to use that technology.

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## FOCUS

In line with the innovation needs, in the Digital Industry area, we focus on the manufacturing full value chain, from production to logistics to retail to consumer engagement. The objective is to manufacture and ship more efficiently, while better addressing customer needs and specificities. Data plays a key role here: throughout the value chain, a massive amount of data is produced, shared. It needs to be analysed to provide insights and drive efficiency.





## INNOVATION NEEDS

Slowing down the healthcare costs is the key driver for innovation in the health domain. The objective is to lower the demand for cure and long-time care and allowing the youth, the working professional and the elderly to maintain a good quality of life. The focus is to leverage sensor data to keep people healthy (through prevention and early detection) or help them cope with existing conditions. Both physical and mental wellbeing are considered. Solutions will need to have an emphasis on usability and user adoption while respecting data privacy.

## EDUCATION NEEDS

Digital health technologies hold promise to enhance patient-related outcomes, to support health care staff by reducing their workload, and to improve the coordination of care. As key users of digital health technologies, health care workers are crucial to enable a meaningful digital transformation of health care. Digital health literacy and digital skills should become prerequisite competencies for health professionals to facilitate the implementation and leverage the potential of digital technologies to improve health.

## FOCUS

We concentrate our efforts on individuals outside of the hospital: On the one hand elderly people, and on the other hand on the workforce and adolescents. We look at technologies like predictive analytics, artificial intelligence, accurate sensing, chatbots, gamification to enable digital solutions targeting the young to prevent or detect mental and physical issues in an early phase (e.g. depressions, overweight, obesity). Environmental sensing and remote diagnosis are used to develop solutions coping with urban and environmental issues (e.g. air pollution, infectious diseases, stress) affecting health of the elderly or other vulnerable people (e.g. with chronic diseases). For health insurers, corporate health programmes, home care- and assisted living providers, nursing homes, and hospitals we identify solutions based on virtual wards, remote unobtrusive monitoring, artificial intelligence (analytics, predictions), robotization (social-mental, help for health professionals), offering on-demand digital solutions offering personalized health & wellbeing services.



## INNOVATION NEEDS

Finance is digital. All established players in the Financial Services Industry acknowledge the need of a deep digital transformation for their organizations as the only means to survive and thrive in the future. Technological capabilities are seen as essential for a future in an industry that is digital in its own essence, as the times of managing physical money and bonds are long gone by. Key is to master the development and delivery of innovative financial products and services through digital technology, with the objective of making user interactions frictionless and financial systems more reliable, more transparent, and less dependent on central

infrastructures. Cybersecurity, authentication, (mobile) payments and a cashless society, robo-advisors, etc. all require rights-sized integration and packaging to add true value and consumer benefits.

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## EDUCATION NEEDS

Finance rules the world, but soon technology will rule finance. As fintech moves from an upstart movement into the mainstream, readying students for the future of finance is vital. The finance industry is shifting dramatically as new technology innovations take over. The world of finance will no longer be banks or investment firms working off spreadsheets and in-person advisement. Customers will increasingly demand the ability to bank from anywhere on their phone. And within financial institutions, technology disruptions like blockchain, and AI, and the evolution of big data are creating new business models to adapt to quickly. There's a shortage of talent with the right skills to integrate new technology into existing systems within industries disrupted by technology.

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## FOCUS

Our efforts in driving the digital transformation of the financial industry concentrate on the future of the retail banking, digital wealth management, and modernized corporate banking and insurance. Artificial intelligence and digital trust (e.g. blockchain) technologies are key enablers but require critical assessment to separate hype from productive applications.

In the coming years, we will further strengthen our recent "Digital Finance" area which is an area that is still maturing.





# INNOVATION AND ENTREPRENEURSHIP

## VISION

Digital platforms touch our everyday lives: operating systems, search, mobile and social are deeply transforming our economy and our society. Network effects apply, putting these platforms at the heart of the global society, and making the world hyper-dependent on them. In order to fuel growth in our

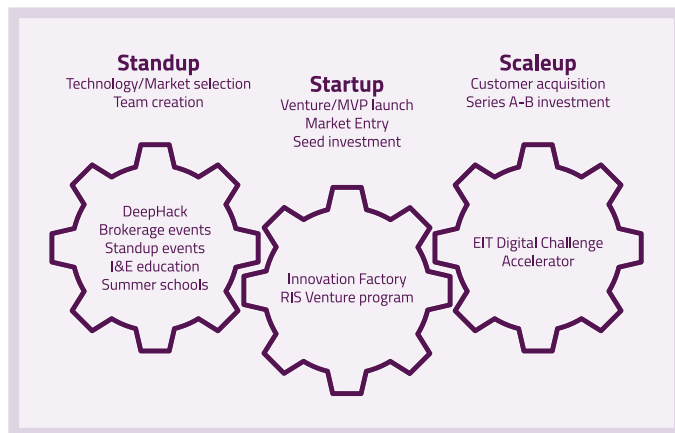
continent and protect our way of life, Europe needs to take centre stage in the future of digital. We need to invent the next wave of digital platforms, applications and innovations.

It is today widely accepted that the next wave of digital innovations will be “deep tech”. These are disruptive solutions built around unique, protected or hard-to-reproduce technological or scientific advances. Deep tech companies have a strong research base. They create value by developing new solutions, not only by disrupting business models.

Deep tech will positively impact all aspects of our economy – industry, transportation, logistics, health, communications, finance, education. Alongside these opportunities, deep tech poses societal challenges, such as job security, data privacy, net neutrality and more recently, the debate around the ethics of artificial intelligence.

In order to lead in deep tech, how can Europe’s strengths be leveraged when it comes to innovation & entrepreneurship?

The first answer is to create value out of top European research results. Traditionally, this is done by tech transfer from Research and Technology Organisations (RTOs) and universities to industry. Increasingly, especially in digital, this is best achieved through venture creation. At RTOs and universities, the tech transfer office role is evolving into an incubator role for startups built by young graduates. Despite these evolutions, European research does not produce enough startups, where the future of Europe is at stake.



**Figure 13:** The integrated Innovation and Entrepreneurship funnel.

The second answer is to build the next generation of large dominant industry players in Europe. Starting up a company can be done quite easily today thanks to “love money”, national incentives, and local incubators. But what is strategically important in digital is to be able to scale up to build large industry players who dominate their market.

The above gaps that we have identified drive the EIT Digital strategy in innovation and entrepreneurship: building and scaling deep tech ventures in our strategic focus areas, an integrated effort captured in the “standup, startup, scaleup” innovation funnel.

## STANDUP PREPARING TO LAUNCH

This first phase of our innovation & entrepreneurship funnel is the standup phase. This phase is about gathering, coaching and connecting the various actors in the EIT Digital ecosystem as a preparation step to launch their innovation. It contains targeted events, education programs as well as the DeepHack. The DeepHack is an open innovation event in challenge (hackathon) format. It leverages the EIT Digital ecosystem and focuses on solutions for hard to crack deep tech problems and on building ecosystems around a technology. As an example, in 2020, six DeepHacks were organized by EIT Digital: Data Against COVID-19, From Farm to Fork, Data for Urban Logistics, Open BIM, Mass Customisation and 3D Printing and Digital Technology for Charities. These DeepHack events attracted several hundred participants (including EIT Digital students) from 38 different countries. Several of the winning teams went on to be supported by the Innovation Factory.

## KEY ACHIEVEMENTS AND SUCCESS STORIES

### SMART LUNCHBOX FIGHTS CHILD OBESITY

EIT Digital Summer Schools inspire business innovation, as demonstrated by the 2020 Eindhoven online Summer School. Three Dutch companies delivered business cases, challenging learners to come up with innovative solutions to fight child obesity, trick an addictive brain, or use sweat as a proxy for blood analysis.

The winning team pitched a smart lunchbox that was connected to a mobile game, combining a tangible product with digital innovation. The runner-up team focused on a digital network for families combatting child obesity, giving feedback to each other and professional support on demand. And even though only one team could win, almost all business ideas will be further examined by the companies that submitted them for the summer school.

### DATA FOR URBAN LOGISTICS DEEPHACK



Changing consumer behaviour, new e-commerce services such as same-day delivery, and the COVID-19 pandemic will lead to a 78% growth in last-mile deliveries in the next decade. This growth will contribute to a substantial increase in CO2 emissions and urban congestion. Deephack participants were tasked to

identify and conceptualise new or improved data driven business solutions within the urban logistics ecosystem and to apply these especially for last-mile deliveries.

Philippe Rapin, CEO of Deephack sponsor Urban Radar, confirmed that he was very impressed with the results. Not only provided the Deephack his company with several concepts worth following up, but also with access to new business partners and student talent.

## STARTUP FROM DEEP TECH TO VENTURE OR TO MVP

The second phase of our innovation & entrepreneurship funnel is the startup phase. Its objective is to drive the market uptake of top European research results ("deep tech"), increasingly by means of entrepreneurship.

The Innovation Factory is at the heart of the startup phase and invests in pan-European entrepreneurial teams together with EIT Digital partner organisations to build digital innovations and new ventures in one of our strategic focus areas. Innovation activities bring together expertise from the EIT Digital ecosystem with partners contributing technology, talent, business models, investments, and channels to the market. Activities deliver innovations to the market primarily through venture creation, and product launch. The focus is on business impact as well as on contribution to the financial sustainability of EIT Digital. The Innovation Factory is a flagship place for organizations and individuals to create innovations and launch deep tech ventures in the digital space in Europe.

Specifically tailored to European emerging markets, the RIS Venture Program stimulates entrepreneurship and supports entrepreneurial teams in the digital space from 20 European countries to finalise their MVP, start their venture and raise funds.

The Innovation Factory and the RIS Venture program contribute to the financial sustainability of EIT Digital by building an equity portfolio as an asset for EIT Digital. Sustainability is achieved through a combination of partner co-funding, co-investment and asset monetization, as well as collaborations with innovation instruments. These collaborations are established at the European level (EIC, DG Connect and Digital Europe Program), and at the national/regional level.

Last but not least, the Innovation Factory and the RIS Venture program need to be sustainable. Further to the EIT financial support, other income will need to be systematically generated through innovation activities and re-invested.

## KEY ACHIEVEMENTS AND SUCCESS STORIES

Figure 14 summarizes the success of our innovation & entrepreneurship efforts over the past years. This steep growth is the result of executing on our strategy to support venture creation as an impactful innovation vehicle.

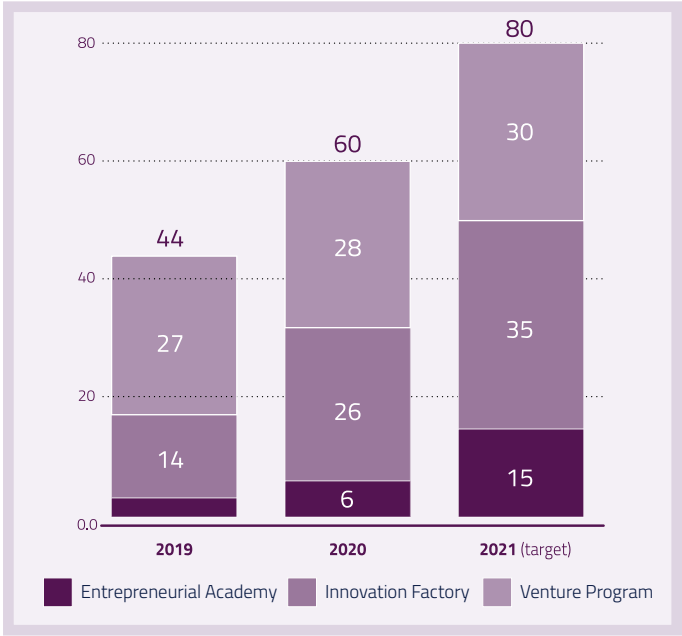


Figure 14: EIT Digital is increasingly entrepreneurial. The number of created startups is rapidly growing and will further increase in the 2022-2024 period.

## PEOPLE MOVEMENT ANALYSIS AND OPTIMIZATION

To enable physical businesses to reduce costs and increase revenues through optimisation of infrastructure, the Ariadne Maps startup, created as an outcome of the People Movement Analysis and Optimization innovation activity, has extended its indoor tracking technology to various use cases. This solution allows to anonymously analyse people’s movements indoors with an accuracy that is up to two orders of magnitude better than GPS. The technology captures signals that smartphones send on different frequencies (GPS, Wi-Fi, GSM, Bluetooth) and uses them to detect people’s movements and location.



The technology is being deployed across several industries, such as retail, transportation and hospitality. Retailers like the Bikini shopping centre in Berlin are leveraging it to find out in front of what stores and what products people dwell the most, which in turn enables businesses to optimize the infrastructure layout and their offerings.

In the transportation sector, Ariadne Maps helps airport managers to understand how much time it takes passengers to reach departure gates from the moment they enter the airport. This allows to identify and remove bottlenecks. The startup has signed up large clients like Singapore Airport as well as Edeka and MVV in Germany. It is also expanding its professional relationship with Deutsche Bahn, which is now using Ariadne Maps’ technology across an entire railway line.

In the hospitality sector, the startup’s technology can help hotel managers to see immediately how the flow of guests is spread across a certain timeframe, and in which common areas. Ariadne Maps has signed deals with hotels in the Emirates, such as the Atlantis Palm Hotel in Dubai.

## LAST MILE AUTONOMOUS DELIVERY

In line with the growth of e-commerce and high demand for low-cost and flexible parcels delivery, the Last Mile Autonomous Delivery (LMAD) innovation activity has developed a software platform to operate multiple types of autonomous delivery robots in the context of urban logistics. These first pilots have been held in controlled areas in which the robots can move smoothly, without facing too many constraints. Later, they will be extended to more challenging cluttered environments, such as city centers.

The LMAD startup was incorporated to commercialise the solution. After deploying the solution for small parcels delivery at the Nokia's Paris-Saclay campus in France, the LMAD startup has successfully operated it in Finland. The local K-Market grocery store at the Aalto University campus has offered its customers an option to order their groceries online and having them delivered by the LMAD's autonomous delivery robot. In another Finnish pilot, the robot has been used to collect and deliver gifts to the Helsinki social services as part of the "Christmas Tree" charity campaign. The LMAD's robot allowed the gifts to be collected safely outdoors, therefore respecting the pandemic context.



Additional pilots are planned in Finland and France to test the software with autonomous delivery robots made by various manufacturers. LMAD is an open, flexible platform that can work with several providers, which is the key differentiator from potential competitors.

## SOCIAL & AUTONOMOUS ROBOTIC HEALTH ASSISTANT



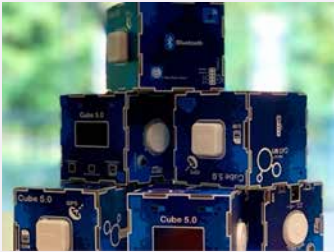
Europe's rapidly ageing population is bringing new challenges to society: while the number of old and sick people is constantly on the rise, care institutions and hospitals are facing serious staffing shortages. Doctors and nurses have to deal with increasing workloads and time pressure, which directly influences the quality of care. The Social & Autonomous Robotic Health Assistant (SARA) innovation activity offers a turnkey hardware and software solution for care institutions and hospitals to improve care recipients' quality of life and provide support to alleviate caregiver-staffing shortages.

SARA functions as a social entity in nursing homes and hospitals. The goal is to reduce the workload of healthcare professionals, so they have more time to do what they value most in their job: spending time with their patients. The robotic assistants are designed to be largely autonomous, since nurses can access the SARA system from a computer or a tablet to create a personalised profile and health plan for every client. The robot will then perform the selected interaction routines. It can also play games, support music therapy and perform repetitive tasks, such as reminding staff or clients when it's time to take medication.

The startup named SARA was created as a result of the innovation activity and has a strong customer traction in the Netherlands.



## GRAVITY



Deliveries do not always arrive at their destination in time and with the right agreed quality. The delivery precision is especially sensitive for high value shipments and extraordinary parcels that are insured against risks of loss, theft, damage or any other event. Any deviation can

cause financial losses due to reimbursements and low customer satisfaction. Prompt and secure detection, monitoring and recording of the shipment events is needed to allow tracking of service quality level, accountability, liability evidence in disputes and for analysis and optimisation of the logistical chain.

The startup InnoTractor, launched in the initial phase of the Gravity innovation activity, developed the DiLLaS product to address this business pain. DiLLaS is a secure data ledger service which facilitates the central registration of logistical transaction data and supply chain management between participating parties. The system allows multiple parties to seamlessly work together in a trusted fashion, whilst securing data privacy for individual parties. Gravity is an IoT platform that is used to collect the data directly from the shipments. Both Gravity and DiLLaS brought to the market by the startup InnoTractor have seen substantial demand. They can be used to enhance and streamline any kind of value chain where logistics is involved, from bike-sharing services to company fleets, from shipping electronic goods to medical supplies.

The startup is finalising contracts with large logistics companies. It will use the first use cases as references in the marketing and communication campaign through the current and additional channels. The goal is to ensure the re-use of investments as well as to increase the recurring income, in order to continue the development of the offerings in terms of functionality, stability and flexible user interface.

## AIDE - ARTIFICIAL INTELLIGENCE DAMAGE ESTIMATION

The car insurance industry is under pressure to provide better customer service in the unpleasant event of a car crash, while improving its cost efficiency. Helping to solve this dilemma with advanced technologies like artificial intelligence and image processing, the AIDE - Artificial Intelligence Damage Estimation innovation activity has developed a software tool that provides an instant estimation of the car damages after an incident by analysing the images taken by customers with their smartphones.

The AIDE solution has two main elements. The first one is the front-end, a user-friendly interface that guides a customer to take the right pictures of the crash through an interactive process. The second element is the backend engine that has processed thousands of annotated images and is able to identify the damaged car parts on new pictures in order to provide the initial damage estimation.



A new startup called Bump Out! was incorporated in the Netherlands to bring the solution to the market. It targets car insurance companies willing to integrate the tool into their claiming process, simplifying steps for the users to fill in claims. Bump Out! deployed the first pilot in its home country and plans to further explore the market there as well as to approach insurance companies in Italy.

## SCALEUP FROM VENTURE TO DOMINANT INDUSTRY PLAYER

The third area of our innovation & entrepreneurship funnel is to build a new generation of dominant European industry players. To this end, we provide growth support to fast growing European deep tech startups (also known as scaleups). This addresses a European weakness: Europe creates a fair number of startups, but most of them stay small. Europe needs to put more emphasis on scaleup support across the continent and beyond, in order to build the likes of Google, Amazon, Facebook and Apple. In addition, deep tech scaleups are the ones that the European future depends upon.

The above observations define the EIT Digital Accelerator's mission. The EIT Digital Accelerator supports fast-growing deep tech ventures in scaling their businesses in Europe and beyond. The programme is tailor-made and designed to meet the internationalisation and financing needs of European scaleups.



The EIT Digital Accelerator integrates the Access to Market, the Access to Finance and the EIT Digital Challenge activities:

- The Access to Market service is driving scaleup introductions to corporate decision makers across all European markets with the purpose of enabling fast, smooth and international deal making.
- The Access to Finance service is supporting the scaleups to raise international fundraising rounds typically in the €5-15m range (A-B rounds).
- The EIT Digital Challenge is EIT Digital Accelerator’s pan-European contest to attract the most promising deep tech scaleups in Europe, that are ready to scale up their businesses internationally by benefitting from the Accelerator’s support (see Figure 15)

The services of the EIT Digital Accelerator are provided through a distributed team of business developers and access to finance specialists providing hands-on support to deep tech scaleups. The Accelerator has direct access to a pan European network of over 500 corporate customers and over 300 private investors (venture capital and corporate venture).

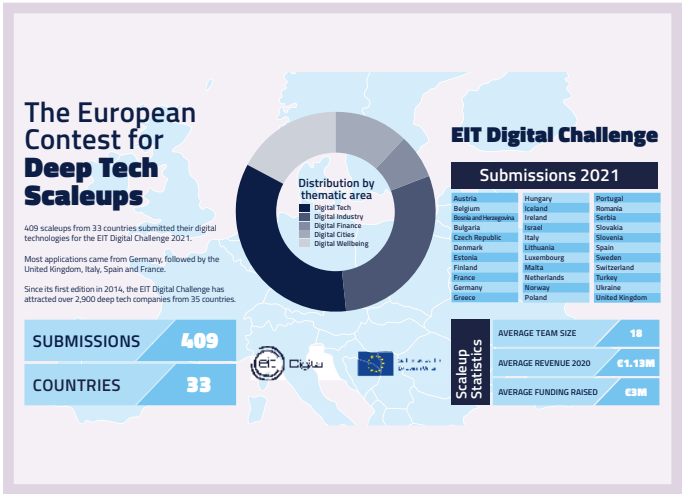


Figure 15: The 2021 edition of the EIT Digital Challenge, our deep tech scaleup contest, was extremely successful.

## KEY ACHIEVEMENTS AND SUCCESS STORIES

Figure 16 shows some key numbers of the Accelerator and how they evolved. EIT Digital Accelerator has been strengthening its position as a unique program for European deep tech scaleups, providing tailored support for raising venture capital and acquiring international customers. In the recent years the EIT Digital Accelerator has been recognised among the top European Accelerators based on the ranking of UBI Global and Startup Heatmap Europe. Since 2012, it has supported 400+ startups and scaleups that collectively raised over 1 billion Euros. Many EIT Digital Accelerator alumni have become internationally successful companies and true European success stories.

In the coming years, our ambition for the EIT Digital Accelerator is to keep being recognized as one of the leading public business accelerators world-wide.

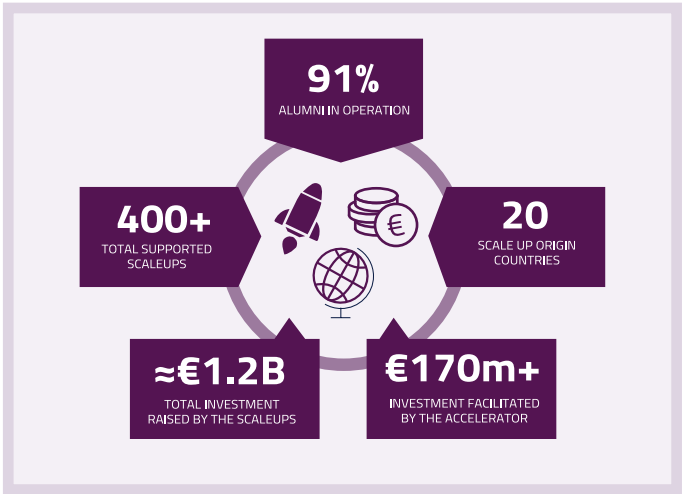


Figure 16: The EIT Digital Accelerator is building the next generation of dominant industry players.

## FIRSTBEAT



Firstbeat is a leading provider of physiological analytics for sports and wellbeing. It transforms heartbeat data into personalized information on exercise, stress and recovery. Founded in 2002 in Finland, Firstbeat has made a breakthrough in physiological modelling by using different factors of heart rate variability (HRV) to quantify underlying physiological processes.

In 2017, Firstbeat was supported by EIT Digital Accelerator professionals who provided coaching and advice on business development and international growth.

Firstbeat's technology has been used by manufacturers of fitness wearables such as Samsung, Suunto, Garmin, Jabra, Sony and Bosch. In June 2020, after many years of strong collaboration Garmin acquired Firstbeat Analytics, which was the consumer licensing business of Firstbeat Technologies.

After the acquisition, Firstbeat Technologies continues operating its Corporate Wellness and Professional Sports businesses. Over 23,000 athletes representing more than 1,000 teams around the world rely on Firstbeat Sports, among them are 25% of Champions League soccer teams and over 50% of NHL teams.

## KONUX

KONUX is a leading German AI scaleup, transforming railway operations for a sustainable future. Its Industrial IoT solution helps minimise train delays by efficiently maintaining railway switches, which are responsible for a fifth of infrastructure related train delays in Europe.



The company joined the EIT Digital Accelerator as a startup in 2014 after winning the first prize in the EIT Digital Challenge. Consequently, they received pan-European coaching and international growth support by the Accelerator team. The company grew extremely fast raising funding in every following year: €1.6M in 2015, €6.2M in 2016, €7.4M in 2017, €16.5M in 2018, €11.5M in 2019, and finally

€65.7 million (\$80m) Series C in 2021. In parallel, the scaleup acquired key international customers such as Deutsche Bahn and SNCF.

Currently, KONUX is active in ten countries, both in Europe and in the most important rail markets in Asia. At the end of 2020, KONUX and Deutsche Bahn (DB) concluded long-term framework agreement on the digitization of DB's switches, as critical elements of the rail infrastructure to make passenger travel and cargo transportation more reliable.

Since its foundation in 2014, KONUX has raised close to €110 million from world-leading investors, expanded to multiple countries in Europe and Asia, and was selected by the World Economic Forum (WEF) as one of the world's 30 most innovative startups and scaleups worldwide.

## SECURITY MATTERS

Dutch company Security Matters developed an innovative automated network and situational awareness platform that enables Critical Infrastructure organizations worldwide to operate best-of-class cyber-resilient Industrial Control Systems.

In 2016, with the support of EIT Digital Accelerator team, the company successfully closed Series A funding of over 4 million Euro led by Robert Bosch Ventures. Security Matters used the funding to expand its sales, marketing and support teams internationally, aiming to become a leader in critical infrastructure markets where operational networks are heavily exposed to cyber-attacks.

In the end of 2018, Security Matters, then global leader in operational technology (OT) network protection, was acquired by an Israeli cybersecurity company Forescout Technologies for an amount of \$113 million.

## NAVYA

With more than 280 employees in France and in the United States, NAVYA develops, manufactures and commercializes autonomous, driverless, and electric vehicles that combine robotic, digital and driving technologies at the highest level.

Since 2015, NAVYA has been the first to market and put into service autonomous mobility solutions, shuttles and cabs. The company offers two lines of solutions: Autonom® Shuttle Evo, a self-driving shuttle for passenger transportation and Autonom®Tract, a self-driving tow-tractor for logistics to facilitate the transport of goods on industrial sites.

The EIT Digital Accelerator supported NAVYA in their 2016

fundraising round with strategic coaching and introductions to industry relevant investors, leading to a €4.1m investment round fuelling the company's international expansion. In 2018, Navya went for IPO, taking in €38m at a valuation of €190m. This is the first IPO of a company supported by EIT Digital.

The company is continuing to expand globally with autonomous vehicles running in many cities in Europe, United States and Asia. As of May 2021, NAVYA has sold over 170 self-driving shuttles in 20 countries.

## METRON

Headquartered in France, Metron is a deep tech scaleup building an Artificial Intelligence that will foster the use of distributed energy systems in the industry. Metron provides an energy intelligence platform to collect, aggregate and analyse all the energy and production data from industrial sites. By using AI algorithms, it allows energy savings and pinpoints optimization potential in the production processes, thereby achieving a ROI in less than a year for its customers.

In 2016, EIT Digital Accelerator team supported Metron's Series A fundraising, resulting in €8 million investment coming from a mix of private and corporate VCs and a family office. The funding was used to boost Metron's international growth and product development. In the following year Metron raised an additional €10 million funding from European and Asian investors.

To date, Metron employs over 140 people and has truly global presence with offices in Europe, Asia, Middle East and Latin America. It serves 100+ industrial clients from automotive, paper, steel, chemical and food and beverage industries.



# ENTREPRENEURIAL EDUCATION

## VISION

No innovation without education! Innovation requires talented people that are able to successfully bring technology to the market. The digital transformation of society and economy poses significant challenges for education. We strongly believe in T-shaped talent that is equipped not only with solid technical knowledge to truly develop and access the value of technology, but also with the necessary entrepreneurship and business

skills to spot opportunities, understand market needs and capitalize on them. All our education programmes have this approach as a core ingredient. Next to the need to have both technical as well as entrepreneurial skills, innovators have to be able to be effective in today's open innovation ecosystems which requires mobility, both organizational as well as geographic. This is another core ingredient in our education programmes.

Digital technology disrupts many domains, including that of education itself. The recent pandemic has demonstrated that online education is becoming increasingly popular. Although universities recognize the developments, the key question remains how online education will impact on-campus education. Our vision is that higher education programmes are gradually embedding online elements in their on-campus programs and are already offering blended education programmes. Therefore, as third core ingredient in our education programs, together with our EIT Digital partners universities, we work on the exploration and development of blended education programmes in order to offer our students the best of both worlds.

Finally, innovation requires talent equipped with up-to-date knowledge on technology and understanding of the domains where the technology is deployed. Especially with digital we see both a fast development of the technology itself, as well as that of its application domains. So, in order to be relevant, our education programmes need to be state-of-the-art and at the frontier of technological and societal developments. This not only means that we have to permanently renew our programmes, but also that we have to make

sure that our students are, during their education, immersed in the core application domains, amongst others through intense contacts with industry. It is here where our education programmes strongly benefit from our innovation activities, our ecosystem and our co-location centres where our students have ample opportunity to work with the diverse actors in our pan-European ecosystem.

For the next years EIT Digital will work on adapting the education activities in order to achieve a sustainable model. We will find new paths of collaboration with additional instruments such as the HEI cross-KIC initiative and we will foster the connection with DG CNECT in order to become coordinators in part of the Digital Skills programmes. Additionally, EIT Digital wants to extend the use of the EIT label to other education programmes, such as professional education.

## MASTER EDUCATION BREED THE DIGITAL ENTREPRENEURS AND INNOVATORS OF TOMORROW

The EIT Digital Master School aims at delivering T-shaped innovators with an entrepreneurial mindset delivering talent to the digital labour market that either will be co-creators of ventures or will enter industry. The emphasis is on delivering an attractive, cutting-edge programme portfolio that addresses Europe's digital skills shortage. This includes EIT Digital's signature Innovation & Entrepreneurship education, as well as innovation learning models like the new Blended Master. EIT Digital Master Programmes are dual degree programmes (2-years and 120 ECTS) with a demand to study in two different countries. The curricula foresee one year of studies at the Entry University (60 ECTS) and one year of studies at the Exit University (60 ECTS). Programmes also include a mandatory standardized Innovation & Entrepreneurship (I&E) minor (30 ECTS) taught over two years. Upon fulfilment of all degree requirements, students receive two degrees: one from the Entry University and a second from the Exit University. Students also receive an EIT Label Certificate endorsed by EIT and issued by EIT Digital.

Figure 19 shows the steadily increasing student intake of the Master School over the past years.

For the period 2022-2024 our strategy for the Master School will

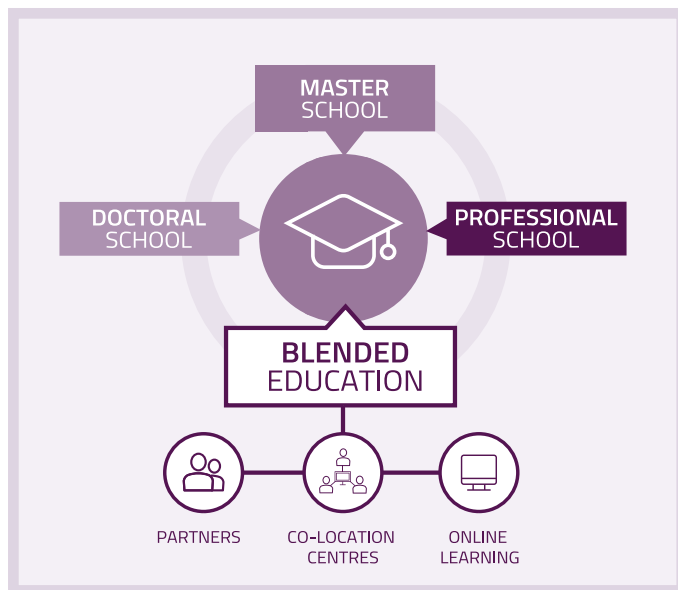
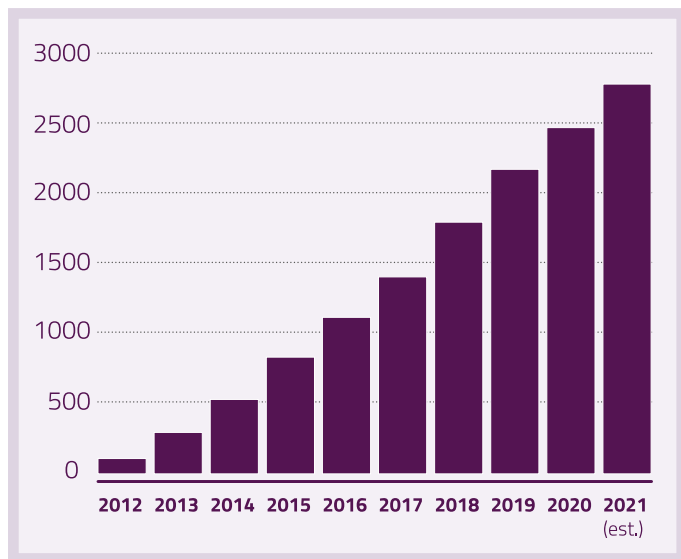


Figure 18: EIT Digital Blended Education model.



**Figure 19:** Cumulative number of EIT Digital Master School students.

further scale the student intake (reaching 500 by 2024) and bring individual entry and exit points to critical mass. To that end we will grow the student recruitment capacity, with a special focus on students from EU countries. We will operate a blended execution model across the complete Master School for selected programmes (including Embedded System, Data Science, and Cybersecurity) with a first semester as online education. We also will provide stronger support for young entrepreneurs, e.g. by providing space in our co-location centres.

The fast pace in digital technologies requires that we continuously improve and renew the technical programmes to keep them state-of-the-art and aligned with our focus areas. We will employ our specialized blended masters on embedded systems and data science across the complete Master School and intensify the involvement of students in our innovation activities. From an operational point of view, we further improve quality and operational excellence and further drive the financial sustainability.



## KEY ACHIEVEMENTS AND SUCCESS STORIES

The achievements of our Master students best exemplify the value and effect our approach to entrepreneurial education has – some of their stories are collected in the following boxes.

### MUHAMMAD HASEEB ASIF AND SRUTHI SREE KUMAR



Two EIT Digital Master School students developed a feature to reduce significantly the up- and downscaling processing time for Apache Flink during their thesis research.

This is so relevant that they were selected to present their solution at two global conferences from Apache and Google.

Muhammad Haseeb Asif and Sruthi Sree Kumar learnt about the Apache Flink open source framework that is being used by global tech companies during their studies Cloud and Network



Infrastructures. They were so inspired that they researched this more during as interns at RISE. During their thesis, they have developed FlinkNDB on top of Mysql Cluster Engine. This is a major feature to improve the up- and downscaling functionality on Apache Flink. Haseeb Asif explains. Their solution reduces up- and downscaling time from hours to seconds. This saves companies a lot of money and reduces energy waste, making computing industry more sustainable.

They got to speak about it at Flink-Forward, the annual global conference for the Apache Flink community. They were listed alongside people from Uber, Netflix, Amazon, Bol.com, Yelp, Spotify, Intel, Ververica, Intuit, Microsoft, and Alibaba. Asif: "People were twittering about our project; someone said that our presentation was the best talk of the day."

Earlier in August, Google invited the students to speak at the Beam Summit 2020, a conference for Apache Beam users worldwide. Their contributions to the conferences and the feedback they received, gives the students the motivation to move on. "When people say that we have developed something that they were looking for, gives an inspiration to deliver", says Sree Kumar.

## DORA PALFI



Dora Palfi was a EIT Digital Master School student and is Co-founder and CEO of imagiLabs. Studying and working in the STEM fields, Dora has experienced first-hand the lack of women in the sector. Dora believes that one major root cause is that girls are not encouraged at a young age to be creators of technology. This is why she conducted a research project with girls between 9-16 years old to understand what gadgets they wanted to use to learn programming and turned the results into a viable product!

The EIT Digital Co-location Centre in Stockholm has provided the necessary space and resources to bring our project to life and was co-organising our MVP launch event with us at the Music Tech Fest in September 2018. The first product is a phone case with an embedded LED matrix that can be programmed to display any text, design or color through coding with the imagiCase app. This is lowering the barrier to entry to programming, in particular for girls.

## MATTEO TADIELLO AND MARCO MOLETTA



Wild boars are a threatening problem to farmers. They destroy land and crops and cause a lot of money. The Italian founders of Flox have seen this happening in the rural area's of Italy where they come from and during their second year of the EIT Digital Master School studies in Sweden. They decided to come with a solution to it and got rewarded a grant of 30.000 euro to build it. In June they will launch their drone based on artificial intelligence that scare off wild boars from farmers' fields. Farmers are waiting in line to buy this innovative product.

In Sweden, 7 out of ten farmers face damages caused by wild boars. Only in southern Sweden the yearly damage cost are up to 20 million euro's. Farmers all across the world face agricultural damage from different wildlife species. And it is getting worse: the number of wild boars is increasing. Everywhere. Current ways to prevent wild boars to damage crops are ineffective. These could be small-scale exclusion, trapping and shooting, says the Journal of Agriculture. None of these are effective.

The Italian EIT Digital Master School students Matteo Tadiello and Marco Moletta finished their double degree masters programme Autonomous Systems in November 2020. They went to the same entry University in Trento, and became friends when they both

had their second year of their EIT Digital Master School at the KTH University in Sweden. Fueled with the startup mentality that they say the EIT Digital Master School brings along, they were inspired to tackle actual societal problems with technology driven solutions.

In this time, two things came together. Tadiello and Moletta were working on a drone project and also spotted an offer of KTH Innovation that provides support to new ideas. They liked working with drones and started to think about building a startup together.

After several iterations, a random sentence about wild boars in Sweden triggered the minds. They believed drones could be an effective solution to solve the wild boar issue.

In March 2020, KTH Innovation gave a grant of 30.000 euro to build their startup Flox on this innovative idea. This funding they spent on market research, testing, prototyping, product developing, and market validation with a focus on Sweden and the rest of Europe.

All this testing results in a service to provide landowners and farmers smart virtual fences. These are created by the autonomous Flox' drones. The drones will automatically detect wild boars, fly to these boars and produce an ultrasound that scares off the wildlife species. "Essentially the drone will be patrolling the field to detect entering animals and guide these animals away from the fields. The sound is only audible for the wild boars. This is an effective way of protecting the crops – even during nights – without causing animals to suffer", says Tadiello.

## XIN HU

EIT Digital Master School graduate Xin Hu's story is more than an EIT Digital education achievement. It is an ideal example of how EIT Digital drives education, innovation and entrepreneurship in a closely integrated way and a flagship story about Europe's attractiveness and deep tech potential.

As Chinese student, Xin Hu chose Europe and EIT Digital for his graduate studies. The entrepreneurial spirit of the EIT Digital Master School tipped the scales for Hu. After finishing his studies, he headed a team developing a product winning the CES 2016 innovation award. Not resting on his laurels, he accepted an offer by a Berlin startup as engineering lead for low-power wide-area-network (LPWAN) technologies, a key enabler for the connection of IoT devices.



Then an offer from an American billionaire changed his path. The founder of US company Ubiquiti, Robert Pera, was interested in Hu and his team and offered them several million dollars in cash and stocks in the listed company if they would come to work for him, in America. In a bold move, he refused the offer.

Consequently, he founded startup MatchX in Germany instead, a company developing decentralised Internet of Things networks. Two years after Hu graduated from the EIT Digital Master School, the first sales revenues came in.

## DOCTORAL EDUCATION TOMORROW'S LEADERS IN DIGITAL INNOVATION

The EIT Digital Industrial Doctoral School was offering Industrial Doctorates aiming at breeding T-shaped talents that have the potential to become the industrial innovation leaders of tomorrow. The PhD work was focussed on product and market driven technology research complemented with the development of innovation and entrepreneurship skills. Within an Industrial Doctorate, PhD students worked under academic supervision on research assignments from industry and benefited from continuous tutoring from this industry. After graduation, these doctors were commercially aware digital leaders who understand current and future challenges, as well as the opportunities this presents to industry.

The PhD candidates worked from so-called Doctoral Training Centres located in our co-location centres on topics aligned with the innovation activities in our focus areas. Next to the core technology research the industrial doctorate programme consisted of hands-on Innovation and Entrepreneurship education and mobility. The standardized I&E education enriched the doctoral studies of each candidate and consisted of two phases: a business competence phase followed by a business development experience. Mobility consisted of minimally six months geographical mobility and six months organizational mobility.

Because of the reduction of EIT funding for the next years, EIT Digital will explore new models for implementing the doctoral education in a sustainable way. The solution might be a combination of finding new financial sources and a more efficient implementation to reduce costs.

## KEY ACHIEVEMENTS AND SUCCESS STORIES

Our PhD graduates put their broad knowledge, curiosity, entrepreneurship and specialized technical training to good use as is demonstrated by the following two examples.

### JULIA WACHE



Dr. Julia Wache completed a Masters in cognitive science and biology at the Humboldt University of Berlin and the University of Vienna before starting the EIT Digital Doctoral School in 2012. She graduated in December 2016 with a thesis on financing a startup.

At the EIT Digital Doctoral School, Wache learned to think like an entrepreneur and to act like one. Her studies in innovation and entrepreneurship at the EIT Digital Doctoral School led her to combine her entrepreneurial ambition with the research of her

twin sister: to provide blind or visually impaired people with a sixth sense that makes their lives easier? Why not found a startup and turn this significant research into a business? Winning the first Prize at the Virginia Tech KnowledgeWorks Global Student Business Concept Challenge provided additional validation and \$25,000 to allow her to take the next step: Julia co-founded feelSpace, a company that now produces a vibrotactile compass belt that functions as a sixth sense. It helps visually impaired people to orientate themselves and find their way. Thanks to a recent cash injection, the company has increased production and has also come up with a game. Wache and her co-founders are getting ready to take their sixth sense across Europe.

### ABDELHADI AZZOUNI



Dr. Abdelhadi Azzouni graduated from the EIT Digital Industrial Doctoral School in 2019 with a PhD in computer science from the University of Waterloo in Canada and Sorbonne University in Paris. The topic of his doctoral thesis was Smart and Secure Network Virtualisation – using machine learning to optimise networks at large scale.

The company he co-founded in 2019, PacketAI, provides an Information Technology Operations (ITOps) solution promising best-in-class service to users while improving the bottom line. It delivers this by using a combination of supervised and unsupervised learning techniques. PacketAI has raised EUR 2.1M from investors such as Aster Capital, BNP Paribas Development, Entrepreneur First and SGPA. In 2021, Azzouni was listed in Forbes 30 Under 30 in the category Technology.

## PROFESSIONAL EDUCATION DEVELOP THE DIGITAL INNOVATION LEADERS OF TODAY

The EIT Digital Professional School keeps European professionals at the forefront in today's fast-paced digital technology by addressing the rising need for reskilling and upskilling. The World Economic Forum estimated that a wide-scale investment in upskilling has the potential to boost GDP by \$6.5 trillion by 2030, with business services, manufacturing and consumer services being the sectors that will benefit the most (see Figure 23). The EIT Digital Professional School supports this upskilling through an innovative portfolio of blended learning courses for experts working in the digital sector or highly influenced by emerging digital technologies. The blended learning format meets the demand for efficient learning and training for professionals under the pressure of job duties. The offering is well aligned with the focus areas of EIT Digital.

For the period 2022-2024, the strategy for the Professional School will be to strengthen the course portfolio and related promotional and go to market efforts to grow the number of annually delivered courses. On the operational side, we improve operational excellence of course production and delivery, significantly grow our marketing, sales and communication capacity, and further drive the financial sustainability. EIT Digital will also explore the implementation of Life Long Learning activities through the collaboration with our partners as well as the participation in initiatives as part of the Digital Europe programme.

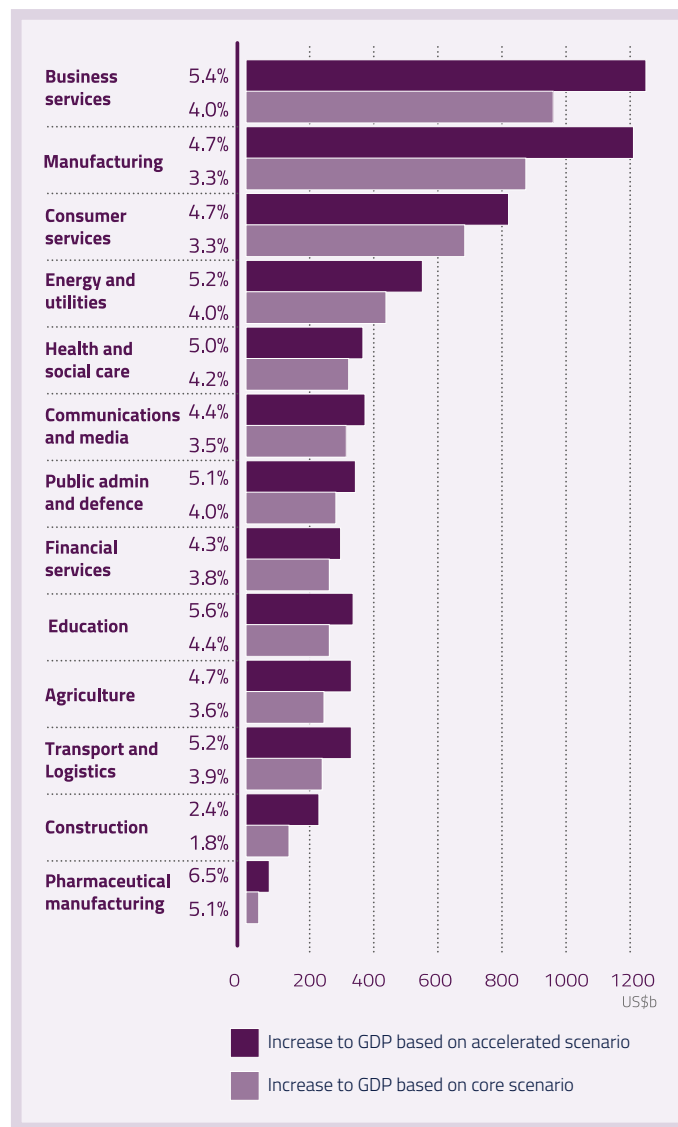


Figure 23: Additional GDP potential due to upskilling, by global sector, expected by 2030. Source: World Economic Forum, Upskilling for Shared Prosperity, January 2021).

## KEY ACHIEVEMENTS AND SUCCESS STORIES

### ZENO AMTMANN

How do new technologies like blockchain impact your business? Questions like these are key to the executive courses EIT Digital Professional School is offering in collaboration with renowned partners. One of these courses is the Blockchain for Decision makers. In 2020, Zeno Amtmann, IT Consultant AAM Management Consulting Ltd, was one of the participants.

"Having experience of almost 20-years in the IT and IT security field with a legal background, I firmly believe that this industry faces challenges, both in diversity and volume in the next couple of years. Blockchain seems to be a promising solution to a number of issues that we face today; however, its full potential is hardly understood. Therefore, it seemed beneficial to spend time studying this field and expand my knowledge in this area as part of my continuous learning.

"The choice of EIT Digital professional education for the course was obvious for what it stands for, a strong digital Europe, but also due to its education partner and course organiser, the prestigious Budapest University of Technology and Economics.

"I had some basic understanding of blockchain technology and one application of that, namely the cryptocurrencies. However, I was not aware of the vast options and possibilities that this technology could provide. The course was extremely useful to understand these and get somewhat "behind the scenes" of blockchain. It offered a great deal of new knowledge and a better understanding of this new phenomenon."

### ADDRESSING THE LACK OF DIGITAL TRANSFORMATION SKILLS IN FOOD INDUSTRY

"Digital transformation is becoming an issue of primary importance in the European food industry," says András Sebők, general manager at Campden BRI in Hungary. Digital transformation is needed due to consumer and societal pressure. But the problem is the lack of skilled people to make it happen. "Education is what's needed", says Sebők in an interview on EIT Digital.

Despite the fact that the food and drink industry is the largest manufacturing industry in the European Union, the sector is far behind other industries when it comes to digital transformation, says Sebők. The industry should speed up, for it faces increasing pressure from the consumer and from society. Consumers for example demand a lot of diverse and personalised food products - at the same cost as a mass-produced items.

Digitalisation and industry 4.0 can be a solution to this challenge and to maintain profit margins, says Sebők. "There is a big unexploited opportunity in the food industry because many of the available solutions in other industries can be adapted to solve food problems relatively easy."

Thus, education is needed. "The real risk is that the industry will be limited by the lack of skilled people. Current employees need conversion training and the industry needs managers to convey the digitalisation message to staff."

This is exactly why food and drink industry research & development institute Campden BRI-Hungary, together with the National Research Council of Italy and ELTE Faculty of Informatics has developed a 4-day executive course Digitalisation and Industry 4.0 in Food Processing for the EIT Digital Professional School. Aimed at executives, it will bring ICT providers and food business leaders together.

## SUMMER EDUCATION TURNING TECHNOLOGY INTO BUSINESS

The EIT Digital Summer School is open for master students, young professionals and PhD students and others who want to deep-dive in emerging digital technologies, learn how to turn technology into business and eventually launch deep-tech startups. The Summer School offers several programmes themed around major societal and industrial challenges for Europe: Digital Cities, Digital Finance, Digital Industry, Digital Tech and Digital Wellbeing. Participants are introduced to the state-of-the-art technologies, meet other professionals and technology savvies. Each programme consists of focused lectures and keynotes by academics and practitioners, project work, company visits, customer interviews and social events. Some of the lectures are oriented to developing soft skills as well. For instance, pitching classes with experienced coaches are organised. An important aspect of the summer school is the interaction with companies and entrepreneurs. Within this framework, participants immerse themselves in real business case studies originating from our network of industrial partners. Participants work in teams to crack these business cases and get insights into how the industry is working on digital transformation or making new business.

During the period 2022-2024, the EIT Digital Summer School will further scale the intake of participants and will increase the opportunities for them to stand-up and launch their deep tech startups.

### KLEMEN KREFT

*"I will advocate for Digital transformation as much as possible within the company"*



Klemen Kreft, PhD Researcher in Pharmaceutical 3D Printing at the University of Ljubljana and Novartis is on a mission to advocate for digital transformation in the company he works for. Kreft signed up for this summer school because "digitalisation and data are becoming increasingly important in the pharmaceutical industry. In my opinion, the industry is lagging behind. My lack of knowledge in digital pushed me to get some introductory insight into how data is used in other industries, which is directly connected to the creation of digital cities".

The summer school did indeed bring him what he was looking for. "I learned so much about the digital transformation of companies. Case studies, simulations and theoretical approaches all added to the interesting implementation of the summer school. The school introduced me to new technologies, which are necessary for the digital transformation of companies. I gained novel insights into how other industries are approaching digital transformation and how they leverage it for their benefit".

Kreft is now more convinced about the need for digital transformation and wants to take it back to Novartis. "I will try to advocate for it as much as possible within the company and contribute towards realisation. It goes without saying that constant change is essential for the company's growth. Also, I will take back the art of preparing engaging presentations. At the summer school, I found out how to carefully tailor each slide to trigger curiosity in the listeners. In this way, I was able to convey my message a lot clearer and retain attention throughout our presentations."

## ONLINE AND BLENDED EDUCATION

EIT Digital delivers online and blended education as part of its programs in the master, doctoral, and professional school, as well as public MOOCs via the Coursera platform. The online modules are mostly I&E modules supporting the I&E education in the various programmes

For the period 2022-2024 our strategy for the online and blended education will maintain the engagement level of our MOOCs while integrating the relevant online modules and MOOCs in the relevant Schools. We will fully align the public MOOC portfolio with our master school programmes, our online innovation and entrepreneurship modules of our various schools and our focus areas.

On the operational side, we will improve operational excellence of course production, streamline the use of platforms for the various

MOOCs and work towards a sustainable production and delivery model.

## KEY ACHIEVEMENTS AND SUCCESS STORIES

EIT Digital provides its online blended Innovation and Entrepreneurship education to raise quality, increase diversity and availability of the top-level content provided by 20 reputable universities of technology around Europe. The universities all together deliver a unique blend of the best of technical excellence and entrepreneurial skills and mindset to digital engineers and entrepreneurs at all stages of their careers. Our online course materials are available on Coursera, one of the largest online education platforms.

### EIT DIGITAL COURSES ON COURSERA (AS OF 2021)

#### Related to Embedded Systems Master Programme:

- Development of Secure Embedded System
- Embedded Hardware and Operating Systems
- Development of Real-Time Systems
- Architecting Smart IoT Devices
- Software Architecture for the Internet of Things
- System Validation (1): Automata and behavioural equivalences
- System Validation (2): Model process behaviour
- System Validation (3): Requirements by modal formulas
- System Validation (4): Modelling Software, Protocols, and other behaviour
- Introduction to Architecting Smart IoT Devices
- Web Connectivity and Security in Embedded Systems
- Quantitative Formal Modeling and Worst-Case Performance Analysis
- Capstone: Autonomous Runway Detection for IoT Mastering Digital Twin

#### Related to Cyber Security Master Programme:

- Becoming Cybersecurity Consultant

- Cyber Security Awareness and Innovation
- Security and Privacy for Big Data
- Privacy and Standardization Capstone

#### Related to Data Science Master Programme:

- Automated Reasoning: satisfiability
- Quantitative Model Checking
- Foundations of mining non-structured medical data
- Data Science for Business Innovation
- Recommender Systems (basics and advanced)
- Automated Reasoning
- Blockchain for the Decision Maker
- Blockchain 360: a State of the Art for Professionals

#### Related to I&E Minor Master Programme: Standardisation

- Value Creation Through Innovation
- Capstone Value Creation through Innovation
- Marketing Strategy for Entrepreneurs
- The Impact of Technology
- Innovation & Entrepreneurship - From Design Thinking to Funding
- Innovation & Entrepreneurship - From Basics to Open Innovation
- Sustainable Digital Innovation
- Business implication of AI

## Integration of education, research and business

No innovation without education, but also no education without innovation. The seamless integration of Education, Research and Business is at the heart of the EIT and thus of EIT Digital. At the core of our knowledge triangle integration strategy is the involvement of our students in our innovation and entrepreneurship activities as well as the engagement of our industry partners in the EIT Digital Academy. During the period 2022-2024 we will further develop and expand our knowledge triangle integration strategy by increasing the number of Master students involved in our ecosystem of innovation activities, industry partners and scaleups. EIT Digital industry partners will be able to explore new business concepts and go-to market strategies by bringing real innovation and entrepreneurship cases to the Master School and Summer School. Digital industry partners will be also able to expand their workforce by offering internships to our pool of talents and eventually scouting their next employees.

### ENTREMO

#### Master School students to deploy remote monitoring device in Hungarian hospitals with startup Entremo

The startup Entremo, co-founded by EIT Digital Master School students, is deploying their product, a wristband to remotely monitor the vital signs of patients, in hospitals and nursing homes in Hungary.

This started within six months with five EIT Digital Master School friends and a friend. Peter Lakatos, graduated in 2020 from the dual degree EIT Digital Master School programme Data Science (Eindhoven University of Technology and KTH), Márton Elodi, studied Human Computer Interaction and Design (Aalto University and KTH), and Miklós Knebel graduated from Autonomous Systems (Technische Universität Berlin and Aalto University). Levente Mitnyik stills studies Embedded Systems



(KTH and Eindhoven University of Technology) and Peter Danos is finalising this year his studies on Visual Computing and Communication (KTH and Aalto University).

The friends earlier won the European Commission #EUvsVirus hackathon's Healthcare category with a prototype of their 3D-printed remote monitoring device. This led to an invitation to submit a call for proposals to the EIT Digital Innovation Factory "DATA against COVID-19" initiative. For this they found four international partners: ELTE-Soft, MOHAnet and Eötvös Lorand University from Hungary and InnoTractor from the Netherlands. The activity was selected and received €500,000 of support from EIT Digital. This in turn led to their startup, Entremo, where more than 20 people are currently contributing.

Entremo deployed in December 2020 their main product, a wristband to remotely monitor the vital signs of patients, in hospitals and nursing homes in Hungary. The watch can measure vital signs of corona patients.





# EIT DIGITAL – WELL CONNECTED AND EMBEDDED IN ITS ENVIRONMENT

## COLLABORATION WITH THE OTHER EIT KICS

EIT Digital leads the operations and expansion of the EIT House in Brussels, an important tool for the EIT Community to increase its visibility towards the Brussels-based stakeholders and decision makers. In other parts of Europe, the EIT Innovation Communities are exploring opportunities to consolidate their presence in cities and regions where more than one KIC is operating. This allows the KICs to talk with a single and stronger voice towards the local and national stakeholders, thus strengthening their positioning and visibility. KICs are also establishing a stronger presence beyond Europe (US, UK & Israel). EIT Digital, as the pioneer KIC in Silicon Valley, leads the operations and expansion of the EIT hub in Silicon Valley and, at the beginning of 2021, has established the EIT hub in the UK, in collaboration with EIT Climate-KIC, to strengthen the EIT Community activities in the UK in the post Brexit context.

In the innovation domain, EIT Digital actively promotes cross-KIC collaboration as digital transformation represents a major opportunity for all the EIT Innovation Communities for addressing the respective global challenges. Starting from 2017, EIT Digital has increasingly strengthened the collaboration with other KICs through joint activities. Collaborations have taken place in various areas; examples include Smart Cities with EIT Climate-KIC, digital solutions for health and wellbeing with EIT Health and product life cycle management with EIT RawMaterials and EIT Climate KIC. In addition, EIT Digital leads a cross-KIC Activity on Artificial Intelligence with EIT Health, EIT Manufacturing, EIT Urban Mobility, EIT Climate-KIC and EIT InnoEnergy, which aims at positioning the EIT and the KICs amongst the major players and thought leaders on AI in Europe. In 2020, the policy report “A European Approach to Artificial Intelligence” has been published and received a lot of positive attention at European Commission level.

In the education domain, EIT Digital participates in several joint initiatives with the other KICs aiming at strengthening the Online Education offer of the KICs (e.g. through the development of cross-KIC MOOCs). In addition, KICs jointly support the implementation of the Digital Education Action Plan of the European Commission. EIT Digital plays a key role in this area by supporting initiatives around EU-wide awareness-raising on online safety and cyber-security. In addition, EIT Digital leads new initiatives such as the EIT-EIC pilot which aims at testing new collaboration mechanisms between the

EIC and the EIT Innovation Communities. EIT Digital is also a strong contributor to the EIT program supporting the Next Generation EU (EIT4NGEU) which will empower the EIT Community to deploy a comprehensive innovation program focusing on a resilient Europe acting in technological sovereignty serving European citizens in an inclusive manner through its vast pan-European ecosystem.

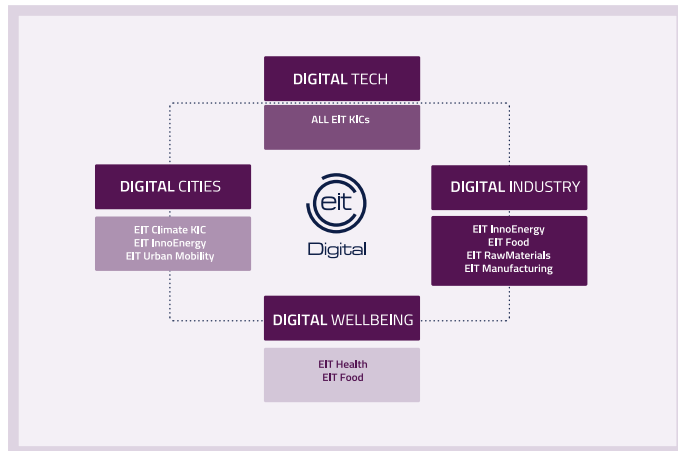


Figure 24: EIT Digital's synergies with other KICs.

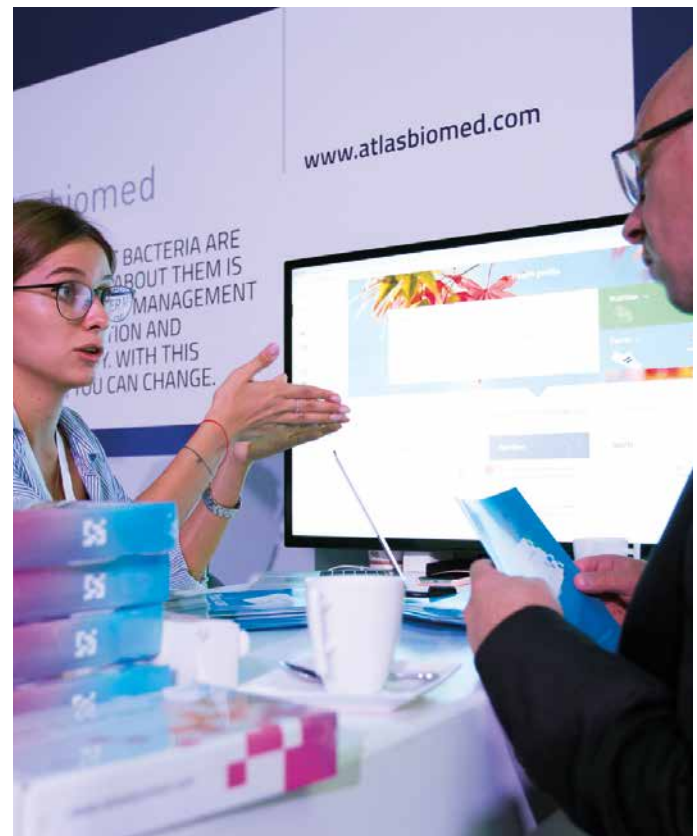
## OTHER EU INSTRUMENTS

On a European level, EIT Digital is well connected and engages with a number of EU programmes, pursuing two major objectives: supporting the execution of its own strategy by actively scouting actors and cooperation opportunities to complement the efforts of its core functions (Innovation and Entrepreneurship, Entrepreneurial Education); reinforcing its leadership in digital transformation by engaging in strategic discussion with other relevant organizations and instruments.

As part of Horizon Europe, EIT Digital will ensure the establishment of synergies and collaborations with all the key actors, with an emphasis on Global Challenges and European Industrial Competitiveness (pillar 2) and Innovative Europe (pillar 3). In addition, the next Multiannual Financial Framework increases its focus on Digital, Single Market and Innovation. EIT Digital's mission

is fully aligned with the objectives of the Digital Europe Programme; leveraging the Letter of Intent signed by EIT Digital and DG Connect in 2021, in the period 2022-2024 we will create collaboration opportunities with it in order to drive the digital transformation of public services and businesses, by boosting investments in high-performance computing and data, artificial intelligence, cybersecurity and advanced digital skills, as well as large-scale deployment of digital technologies across European economic sectors.

The table below summarizes the collaborations established by EIT Digital with other instruments.



EU Collaborations	EIT Digital Objectives
European Investment Fund (EIF)	Agreement signed in 2021. European Investment Fund and EIT Digital have teamed up to close digital skills gap in Europe. The agreement between EIF and EIT Digital is supporting the EU's digital transformation. This will allow EIT Digital to offer deferred payment schemes for students and learners participating in its courses, thus improving access to education.
European Innovation Council (EIC)	LoI signed in 2020 to maximise EU support for game-changing innovators and entrepreneurs across Europe. EIT Digital and EIC are collaborating on a pilot action aiming at testing mechanisms by which the most innovative businesses stemming from EIT Digital can be channelled to the EIC, creating a pipeline of impactful innovations. Moreover, EIT Digital is implementing the EIC Accelerator Fast Track to support the access of EIT Digital supported startups and scaleups to the EIC Accelerator.
DG Connect	LoI signed in 2021 to jointly address the common objective of contributing to the European digital transformation with a view of building a strong digital Europe fostering an inclusive, fair and sustainable growth. This objective translates into activities to support the development of strategic digital capacities, community building, digital education and skills, innovation infrastructure and capabilities, or the creation of high-quality jobs.
DG Connect / Cybersecurity	CONCORDIA project (2019-2022), aiming at establishing and operating a pilot for a Cybersecurity Competence Network, developing, and implementing a common cybersecurity Research & Innovation Roadmap. EIT Digital's focus is on skill building.
DG Connect / Digitizing European Industry	MIDIH project (2017-2020) coordinated by EIT Digital. It created a platform and framework applied in the creation of a European network of manufacturing "Digital Innovation Hubs". QU4LITY project (2019-2022) focusing on Zero Defect Manufacturing in alignment with EIT Digital Industry Focus Area
DG Connect / European Digital Innovation Hubs (EDIHs)	EIT Digital is engaged in 12 calls to support the establishment of European Digital Innovation Hubs in the location where it operates, thus supporting the matching between activities at European level with national activities implemented in the Member States (e.g. resilience recovery fund). At the same time, EIT Digital will ensure more coordination over the network of EDIHs.
DG Connect / FI-PPP	Memorandum of Collaboration (MoC) signed in 2013. It took shape through two projects (I3H, coordinated by EIT Digital and FI- Core, with EIT Digital participation). The collaboration supported the sustainability of the FIWARE platform by a) creating a network of innovation hubs capable of fostering FIWARE adoption (I3H project, ended in 2016); b) disseminating FIWARE (FI-CORE, ended in 2016); c) making FIWARE available as a reference platform in relevant EIT Digital's innovation activities (e.g. CEDUS and Oedipus).
DG Connect / DAIRO	MoC signed in 2015, which materialized in EIT Digital's participation in the BDVe project, concluded in 2020, where EIT Digital contributed to: a) the construction of a big data-oriented network of innovation centres; b) identification of new frameworks for construction of the new skills required by the big data economy. Additional collaboration opportunities in the context of Horizon Europe are being explored.
European Business Angels Network (EBAN)	We are in discussion with EBAN in the context of the EIT Digital Innovation Factory and Accelerator.
DG Connect / FIRE+ (now in 5G)	Implemented through the SoftFire project in the area of SDN/NFV testbeds. The project is coordinated by EIT Digital.
DG Grow / Startup Europe	Implemented through the Silicon Valley Hub; it involves the joint organization of the SEC2SV (Startup Europe Comes to Silicon Valley).
DG Connect / New Generation Internet	Collaboration implemented through participation in the AI4EU project. AI4EU is creating a European platform for Artificial Intelligence that will act as a broker, developer and one-stop shop providing and showcasing services, expertise, algorithms, software frameworks, development tools, components, modules, data, computing resources, prototyping functions and access to funding.
DG JRC	EIT Digital is actively exploring collaboration opportunities, both within the framework established by EIT and through direct discussions with the DG JRC.
Fiware Foundation	EIT Digital collaborates with the FIWARE Foundation to support its efforts in picking up the baton of the FI-PPP and deploying FIWARE within Industry and City domains. The collaboration has materialised through: a) the joint rental of a space in Berlin shared by the Berlin Node and the FIWARE Foundation, to facilitate exchange and joint work; b) the joint participation in H2020 projects, e.g. MIDIH; c) EIT Digital support of FIWARE deployment in the Industry and Smart Cities areas (e.g. CEDUS Innovation Activity; Oedipus HII) and through specific projects such as the Select4Cities PpP and MIDIH.
Digital Skills and Job Coalition	In January 2017, EIT Digital became a member of the Digital Skills and Job Coalition.
The European Telecommunications Standards Institute (ETSI)	MoC signed in 2014, with the aim of sharing information and aligning activities. It builds on the role played by ETSI in setting up operational standards and on the role played by EIT Digital in deploying technologies and products that have to meet those standards. ETSI is supporting SoftFire's standardisation activities in the SDN field.

## NATIONAL ORGANISATIONS

National Programme	EIT Digital Objectives
Finland: Business Finland	Be involved (potentially coordinate) a selected number of Business Finland growth engine activities, to bring European dimension, scaleup support, and entrepreneurial education to Business Finland growth engines.
Finland: Do Digi Forum	Participation in Do Digi Forum (National Coalition on Skills and Jobs) to boost digital transformation in Finland
Finland: Fitech	Use FiTech sponsorship for professionals in Finland to provide education on I&E learning and business case studies
Hungary: Centre for academia-industry cooperation	participate in the ecosystem of the leading Hungarian universities, research institutes and industries active in the field of computer science and computer engineering
Hungary: 5G Coalition	supporting Hungary's aim to become one of European development centres of 5G application development and testing; enabling the country to be among the firsts to introduce 5G in practice
Hungary: Artificial Intelligence Coalition	government led initiative to jointly shape and frame the directions of AI related development in Hungary, participating in the creation of the country's AI strategy and in the analysis of related societal and economic challenges
Hungary: Digital Success Programme (Digitális Jólét Program, DJP)	Digital Success Programme affects the entire digital ecosystem and the aim is that every Hungarian citizen and business can benefit from digitalisation.
Italy: Fondazione Cassa Depositi e Prestiti (CDP)	Collaboration agreement signed in 2021 aiming at providing financial support and scholarships to Italian EIT Digital Master School students.
Italy: Ministry of Education, Universities and Research, National Cluster – Smart Communities	Collaboration and strategic alignment with technological roadmap to enhance the impact of EIT Digital activities
Netherlands: INTERSECT	Consortium to adopt a new perspective on IoT cybersecurity. Participate in consortium of 45 universities, RTOs, corporates, SMEs and (semi-)governmental institutes, and connecting the complementary ecosystems.
Sweden: AI innovation of Sweden	Supporting the startups and scaleups in this national Applied AI ecosystem in their internationalisation ambitions.
Sweden: FinDec	Supporting the startups and scaleups in this national fintech ecosystem in their internationalisation ambitions.
Sweden: Internet of Things Sweden (Strategic Innovation Programme)	Supporting the startups and scaleups in the programme in their internationalisation ambitions.
Sweden: Smarter Electronic Systems (Strategic Innovation Programme)	Supporting the startups and scaleups in the programme in their internationalisation ambitions.
Sweden: Vinnova, Tillväxtverket, Energimyndigheten, Vetenskapsrådet	EIT Digital partners are engaged in joint national open innovation projects and proposals, and scouting startups for the EIT Digital Accelerator programme (KTH Innovation, STING)
United Kingdom: Digital Catapult and Future Cities Catapult	Jointly plan and deliver open events, cross-refer promising digital organisations, maintain good cross-organisational understanding, as the focus of the Catapult organisations is complementary to EIT Digital.



# A FUTURE PROOF SUSTAINABLE ORGANISATION DELIVERING GLOBAL IMPACT

Since its start in 2010 EIT Digital has gradually scaled up its operations in innovation and education resulting in increased delivery of innovations, ventures and graduates. The delivery has grown the recognition of the organisation demonstrated by the growing membership,

the geographic expansion, the growing number of collaborations with other actors in the European research, development, innovation, entrepreneurship, and education space, as well as the increased visibility in tier-1 media and in the policy debate.

To build a strong digital Europe, EIT Digital is increasingly engaging in thought leadership initiatives, such as the Makers and Shapers journey: captains of industry and high-profile startup executives (the Makers) and policymakers from EU Institutions and Authorities (the Shapers) are brought to share their vision on key areas of digital innovation and the way forward to a strong digital Europe. We are also increasingly working on policy recommendations to support the decision makers at European level: following our highly praised policy reports on the Digital Transformation of the European industry, on European Digital Infrastructure and Data Sovereignty and a European Approach to AI (that received a lot of positive attention, including from the office of President von der Leyen), we will further develop policy recommendation reports in the area of green digital, digital finance and digital education.

## CORE SUPPORT FOR FINANCE, HUMAN RESOURCES, AND COMMUNICATION

For the period 2022-2024 our core support efforts will specifically address:

- The strengthening of our sustainability strategy
- A strong focus on talent at all levels of our organisation and across all of our activities
- The further building of the EIT Digital reputation, brand and thought leadership position

## SUSTAINABILITY DEVELOPMENT 2022 – 2024

In the period 2022-2024, EIT Digital will further develop into an impactful and sustainable organization. Our ambition is to keep a stable level of investment in spite of the decreasing EIT Financial support. We will therefore further develop our sustainability strategy to generate income to be re-invested in impactful activities. The main elements of the EIT Digital's sustainability strategy are reported below.

## INNOVATION & ENTREPRENEURSHIP: PRE-INCUBATION

For venture creating Innovation Activities, EIT Digital takes minority equity in startups created as a result of these activities, in consideration for the setup. The equity allocated to EIT Digital consists of ordinary shares. For MVP creating activities, these contribute to EIT Digital's sustainability by providing a financial return to EIT Digital. With more than 180 equity positions at the end of 2021, in 2022-2024 we will further accelerate the size and value of this portfolio by creating additional ventures from a strong collection of innovation activities as well as from its RIS venture program.

Aligned with this strategy, we will implement the financing strategy of our innovation factory, by diversifying the sources of funding (EIT, other EU funding, income from equity) and by systematically engaging with private seed investors and national/regional funds to support the financing of the ventures created out of our innovation activities, as well as the RIS Venture Program. A compelling value proposition for investors has been developed to showcase them the opportunity of investing in our startups, support them and increase their chances of success.

## INNOVATION & ENTREPRENEURSHIP: SCALEUP ACCELERATION

The EIT Digital Accelerator will continue to operate with the already established model: a service provider to scaleups for Access-to-Market and Access-to-Finance. Scaleups that benefit from the services of the EIT Digital Accelerator compensate EIT Digital for the provisioning of these services through a base fee and a success fee for each Access to Market and Access to Finance deal facilitated. It is expected to support a portfolio of more than 70 scaleups each year and to attract more than €45m VC investments every year.

## ENTREPRENEURIAL EDUCATION

Thanks to its increased reputation, the EIT Digital Master School will increase the income from tuition fees by attracting more students paying higher tuition fees. At the same time, we will reduce the number of scholarships. The limited number of EIT Digital scholarships will support the very talented students that do not have national scholarships or private means to pay for the studies. These elite scholarships will safeguard EIT Digital to work with a student body capable of becoming top innovators and digital transformers. The EIT Digital Summer Schools are also open for external paying participants that contribute to the sustainability.

The EIT Digital Professional School generates income for EIT Digital via a revenue share agreement between EIT Digital and its partners, who develop and operate the courses. The stronger focus on on-demand courses able to meet the need of the industry will support increased revenue generation.

## ECOSYSTEM

EIT Digital will grow its ecosystem by attracting new, strategically selected partners each year. In addition, a number of organizations will increasingly engage in our activities on a temporary basis as external Partners. Both partner categories pay an annual membership fee. The income from this source is expected to exceed €3m as of 2022.

Both at European level and in the member states where we operate, we will further deepen the connections with regional and national funding agencies in order to obtain financial support for our local operations. When applicable and possible, we will act in synergy with partners and/or other EIT KICs in order to maximise the impact. In addition, the EIT Digital Nodes will explore possibilities of getting EIT Digital activities embedded in the national recovery funds what will be deployed by the Member States as part of the Next Generation EU (NGEU) package.

## CO-INVESTMENT FROM PARTNERS

In addition to income generation, partners' co-investment supports the cost of activities. The level of co-investment will grow to more than 60% in 2022-2024.

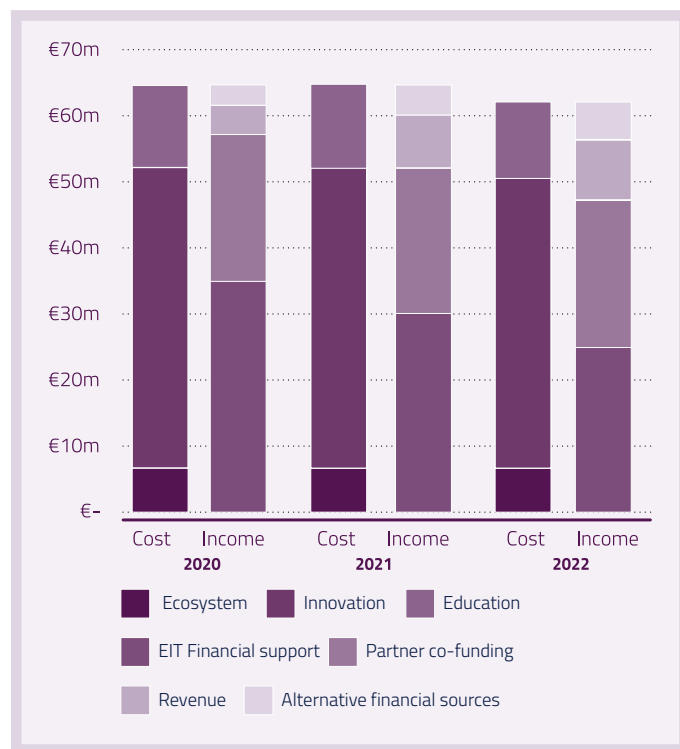


Figure 25: EIT Digital income projections 2022-2024



# ANNEX: KEY PERFORMANCE INDICATORS

Table 1: Selected EIT digital impact and growth development as measured by Key Performance Indicators.

KPI	2022	2023	2024
Partners in the ecosystem	360	400	450
Products launched on the market	65	67	70
Startups created	40	50	60
Annual intake of scaleups into Accelerator	40	45	50
Total investment attracted by supported and alumni scaleups	€1.1B	€1.2m	€1.3Bm
Annual Master school graduates	400	450	500
Annual learners	600	800	1000
Internships offered by industrial Partners to second-year Master School students	50%	50%	50%





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